

Characterizing Occupational and Environmental Exposures in the ACMT Toxicology Investigators Consortium Database

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Background: Chemical and physical hazards exist in the workplace that cause significant adverse health effects. These exposures often lead patients to obtain care from medical toxicologists in the clinical setting.

Research Question: We described cases evaluated for occupational or environmental exposures in the outpatient clinical setting.

Methods: We queried the ACMT ToxIC Registry for all cases from the years 2015 to 2016. We included patients who were 18 years old and were seen in the outpatient/clinic/office setting. We used descriptive statistics to detail demographic data including age and sex, source of referral, reason for the encounter, agent(s) of exposure if known, route of exposure, and treatment.

Results: We reviewed 431 cases. Mean age was 48.8 years of age [SD \pm 14 years]. Two hundred fourteen were male (49.6%). Referrals to clinic were from the primary care provider or other outpatient treating physician (58%), self-referral (14%), employer (14%), poison center (8%), and emergency department (4%). Two hundred and ninety-two (67.7%) patients were identified as having a known exposure and 139 (32.2%) were listed as having an unknown exposure. Known exposure include metals 62/292 (21.2%), hydrocarbons 53/292 (18.2%), gasses/vapors/irritants/dusts 46/292 (15.8%), mold 48/292 (16.4%), caustics 20/292 (6.8%), insecticides 15/292 (5.1%), alcohols 7/292 (2.3%), and other household and industrial toxicants 33/292 (11.3%). Routes of exposure are listed as follows: inhalation 234/292 (80.1%) oral 20/292 (6.8%), dermal 22/292 (7.516%), and unlisted 16/292 (5.5%). Antidotal therapy and laboratory evaluations were not obtained in the majority of cases.

Conclusion: Most patients were referred by their primary care doctor and did not require antidotal therapy. This data will help guide future practice in this area of toxicology and will aid with medical toxicology board curriculum.